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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/771,907	02/03/2004	Cyril A. Migdal	0206-PA	3867
7590 05/22/2008 CROMPTON CORPORATION Benson Road Middlebury, CT 06749				
EXAMINER				
LANG, AMY T				
ART UNIT		PAPER NUMBER		
3731				
MAIL DATE		DELIVERY MODE		
05/22/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/771,907

**Applicant(s)**

MIGDAL ET AL.

**Examiner**

AMY T. LANG

**Art Unit**

3731

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 February 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 5-10, 15-18 and 20-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 5-10, 15-18, and 20-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

This Non-Final office action included herewith replaces the action mailed 09/11/2007 since Wegmann is not proper as prior art.

#### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. **Claims 5-10, 15-18, and 20-25** are rejected under 35 U.S.C. 103(a) as being unpatentable over Reyes-Gavilan (EP 1,054,052 A2) in view of Abraham et al. (US 2002/0006878 A1).

With regard to **claims 5-10 and 15-21**, Reyes-Gavilan discloses a lubricating composition comprised of lubricating oil and antioxidants ([0001], [0048]). The antioxidants encompass a hindered phenolic and a thioether compound having the formula (C<sub>13</sub>H<sub>27</sub>OCCH<sub>2</sub>CH<sub>2</sub>)<sub>2</sub>S, which clearly overlaps the instantly claimed structure in

claims 21 and 22. Additionally, the thioether compound overlaps the instantly claimed dithidecylthiodipropionate since both terminal alkyl groups comprise 13 carbon atoms (see instant specification page 5, lines 19-20). Reyes-Gavilan further teaches that other hindered phenolics than specified can be utilized in the composition ([0014]). However, Reyes Gavilan does not specifically disclose the hindered phenolic as butyl-3-(3-5-di-tert-butyl-4-hydroxyphenyl)propionate.

Abraham et al. (hereinafter Abraham) discloses a hindered phenolic antioxidant that comprises good performance properties when utilized in an industrial lubricant ([0002]; [0016]). The hindered phenol is specifically disclosed as butyl-3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate ([0031]).

Reyes-Gavilan also discloses an industrial lubricant that comprises an alkylated monophenol ([0002]; [0015]). Since Reyes-Gavilan teaches that other hindered phenols than specifically disclosed may be utilized in the lubricant composition ([0014]) and Abraham discloses a specific hindered phenol that is advantageous in industrial lubricants, it would have been obvious to one of ordinary skill in the art at the time of the invention for Reyes-Gavilan to utilize the hindered phenol of Abraham.

The amount of the hindered phenolic antioxidant, as disclosed by Reyes-Gavilan, ranges from 25 to 60 wt% of the lubricating composition, while the amount of the thioether is from 5 to 30 wt% ([0047], [0062]). Therefore, the lubricating composition comprises 60 wt% of the hindered phenolic antioxidant, which is greater than the instantly claimed 40 wt%. Furthermore, if the hindered phenolic is present at 30 wt%

and the thioether at 25 wt%, the ratio of hindered phenolic to thioether is 55:45, which clearly overlaps the instant claims.

Other additives are present in the lubricant composition of Reyes-Gavilan including viscosity index improvers, pour point depressants, dispersant, detergents, rust inhibitors, antiwear agents, metal deactivators, and other antioxidants ([0052] – [0060]).

With regard to **claims 22-25**, Reyes-Gavilan teaches incorporating the additional thioether antioxidant with the hindered phenolic antioxidant is advantageous ([0047]). Since Reyes-Gavilan is silent regarding how the thioether is incorporated into the lubricant composition, it would have been obvious to one of ordinary skill at the time of the invention to add the two antioxidants together as a blend solution.

### ***Response to Arguments***

4. Applicant's arguments, filed 02/06/2008, with respect to Wegmann have been fully considered and are persuasive. The rejection has been withdrawn.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to AMY T. LANG whose telephone number is (571)272-9057. The examiner can normally be reached on M-F 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Todd Manahan can be reached on 571-272-4713. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3731

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

05/14/2008

/Amy T Lang/

Examiner, Art Unit 3731

/Todd E Manahan/

Supervisory Patent Examiner, Art Unit 3731